

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019342**Date Inspected:** 13-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1100**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Section**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and to monitor American Bridge/Fluor (ABF) welding operations.

The following observations were made:

- 1) At weld joint 7E/8E D-1 and 2, inside the OBG section: QC Inspector Jesus Cayabyab was performing Ultrasonic Testing (UT) on the completed production weld.
- 2) At weld joint 7E/8E B, inside the OBG section: ABF welding personnel Fred Kaddu (#2188) was performing repair welding using the SMAW process. QC Inspector Jesus Cayabyab was monitoring the work.
- 3) At weld joint 8W/9W A-3, outside the OBG section: ABF welding personnel Wai Kitlai (#2953) was observed performing repair welding using the Shielded Metal Arc Welding (SMAW) process. QC Inspector Steve McConnell was monitoring the work.
- 4) At weld joint 9W/10W D-1 and 2, inside the OBG section: ABF welding personnel Hua Qiang Hwang (#2930) and Xiao Jian Wan (#9677) were performing production welding using the Flux Cored Arc Welding (FCAW) process. QC Inspector Fred Von Hoff was monitoring the work.
- 5) At weld joint 8W/9W C-2, inside the OBG section: ABF welding personnel Song Tao Huang (#3794) was using

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the FCAW process on a track system for production welding. QC Inspector Fred Von Hoff was monitoring the work.

6) At weld joint 8W/9W F, inside the OBG section: ABF welding personnel were grinding the back gouged weld in preparation of welding.

At weld joint 7E/8E D-1 and 2, inside the OBG section this QA Inspector observed QC Inspector Jesus Cayabyab performing Ultrasonic Testing (UT) on the completed production weld. This QA Inspector observed several areas had been marked for repair as the inspection work progressed.

At weld joint 7E/8E B, inside the OBG section this QA Inspector observed ABF welding personnel Fred Kaddu (#2188) using the carbon arc process to gouge out several repair areas for welding. This QA Inspector randomly observed as QC Inspector Jesus Cayabyab performed a visual and Magnetic Particle Testing (MT) on the excavations to verify sound metal and an adequate joint configuration prior to repair welding. QC Inspector Jesus Cayabyab informed this QA Inspector the visual and MT inspection had been accepted. This QA Inspector observed the location of the repair excavations as follows: Y-460 (100 mm long and 15 mm deep) and Y-430 (70 mm long and 12 mm deep). This QA Inspector randomly observed as the areas were preheated with a gas torch by ABF welding personnel Fred Kaddu (#2188) and verified to be at a temperature great than 150°F by QC Inspector Jesus Cayabyab using an electric temperature gauge. On a piece of scrap material this QA Inspector observed the following welding parameters: 124 amperes using a 3.2 mm diameter E7018H4R electrode. The work observed at this location this date appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-1002-Repair and the contract requirements.

At weld joint 8W/9W A-3, outside the OBG section this QA Inspector observed ABF welding personnel Wai Kitlai (#2953) performing repair welding at location Y-5070 using the SMAW process. This QA Inspector observed the repair welding consisted of fill and cover passes due to welding the previous day. This QA Inspector observed QC Inspector Steve McConnell verify the preheat temperature was greater than the minimum specified in the WPS with an electronic temperature gauge and the following welding parameters: 138 amperes using a 3.2 mm diameter E7018H4R electrode. The work observed appeared to comply with ABF-WPS-D15-1001-Repair and the contract requirements.

At weld joint 9W/10W D-1 and 2, inside the OBG section this QA Inspector observed ABF welding personnel Hua Qiang Hwang (#2930) and Xiao Jian Wan (#9677) were performing production welding using the FCAW process. ABF welding personnel Hua Qiang Hwang (#2930) was welding the area adjacent to weld joint "E" and Xiao Jian Wan (#9677) was welding the area adjacent to weld "B". The welding was being performed at the ends of weld "D" where there is limited space for the Submerged Arc Welding (SAW) track system. This QA Inspector observed QC Inspector Fred Von Hoff verify the following welding parameters: 255 amperes and 25.5 volts for Xiao Jian Wan (#9677) and 260 amperes and 24.5 volts for Hua Qiang Hwang (#2930). The work observed appeared to comply with ABF-WPS-D15-3040A-1 and the contract requirements.

At weld joint 8W/9W C-2, inside the OBG section this QA Inspector observed ABF welding personnel Song Tao Huang (#3794) using the FCAW process on a track system for production welding. This QA Inspector verified the following welding parameters: 235 amperes and 23.6 volts at a travel speed of 260 mm per minute. This QA Inspector randomly observed QC Inspector Fred Von Hoff monitoring the work. The work observed at this

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location appeared to comply with ABF-WPS-D15-3040A-3 and the contract requirements.

At weld joint 8W/9W F, inside the OBG section this QA Inspector observed ABF personnel were grinding the previously back gouged section of the weld joint in preparation for production welding.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer
